

CLAIMS

1. A method for providing dynamic workload transition in an application server for an e-business system, comprising:

detecting an overload condition in the e-business system;

reducing system resources allocated to a first set of workload tasks in the e-business system;

allocating at least part of said reduced system resources to a second set of lighter workload tasks in the e-business system; and

if adequate resources in the e-business system become available and if said first set of workload tasks require processing, allocating said adequate resources to said first set of workload tasks.

2. The method according to claim 1, wherein said detecting step further comprises monitoring system parameters in the e-business system; and analyzing said monitored system parameters to determine when said overload condition occurs in the e-business system.

3. The method according to claim 2, wherein said monitored system parameters comprises CPU utilization, disk I/O and memory utilization.

4. A method for providing dynamic workload transition in an application server for

an e-business system, comprising:

- receiving a first work request;
- determining the workload of said first work request;
- comparing said determined workload of said first work request to available system resources to determine if the performance of said first work request is capable of causing a system overload condition; and
- if said workload of said first work request is capable of causing a system overload condition, transitioning to a second lighter work request, said second lighter work request having a lighter workload requiring less system resources, thereby preventing said system overload condition.

5. The method according to claim 4, further comprising analyzing system parameters to determine whether said first workload causes said system overload condition.

6. The method according to claim 5, wherein said system parameters comprises CPU utilization, disk I/O and memory utilization.

7. The method according to claim 5, further comprising, reporting said system parameters to a workload driver.

8. A method for providing dynamic workload transition in an application server for

an e-business system, comprising:

processing a workload assigned to a workload driver;

monitoring system resources to detect an overload condition while processing

said workload;

allocating processing resources to a lighter workload when said workload driver

detects a system overload condition caused by said processed workload during said

monitoring step; and

if said processed workload still require processing, transitioning to said

processed workload from said lighter workload upon availability of adequate processing

resources.

9. A system for providing dynamic workload transition in an e-business system, comprising:

an application server for receiving work requests and for processing workloads identified by said work requests;

a workload driver for handling workload management of said application server, said handling comprising diminishing processing of a currently processed workload which causes an overload condition, and initiating the processing of a lighter workload, said lighter workload having a lighter load than said diminished workload; and

a status driver for reporting system data to said workload driver, said system data providing information regarding the existence of said overload condition.

1 10. A machine readable storage having stored thereon, a computer program having  
2 a plurality of code sections, said code sections executable by a machine for causing the  
3 machine to perform the steps of:

4 detecting an overload condition in an e-business system, said detecting step for  
5 providing dynamic workload transition in an application server for the e-business  
6 system;

7 reducing system resources allocated to a first set of workload tasks in the e-  
8 business system;

9 allocating at least part of said reduced e-business system resources to a second  
10 set of lighter workload tasks in the system; and

11 if adequate resources in the e-business system become available and if said  
12 first set of workload tasks still require processing, allocating said adequate resources to  
13 said first set of workload tasks.

1 11. The machine readable storage according to claim 10, wherein said detecting  
2 step further comprises:

3 monitoring system parameters within the e-business system; and

4 analyzing said monitored system parameters to determine when said overload  
5 condition occurs in the e-business system.

1 12. The machine readable storage according to claim 11, wherein said monitored  
2 system parameters comprises CPU utilization, disk I/O and memory utilization.

1 13. A machine readable storage having stored thereon, a computer program having  
2 a plurality of code sections, said code sections executable by a machine for causing the  
3 machine to perform the steps of:

4 receiving a first work request, said receiving step for providing dynamic workload  
5 transition in an application server for an e-business system;

6 determining a workload of said first work request;

7 comparing said determined workload of said first work request to available  
8 system resources to determine if the performance of said first work request is capable  
9 of causing a system overload condition; and

10 if said workload of said first work request is capable of causing a system  
11 overload condition, transitioning to a second lighter work request, said second lighter  
12 work request having a lighter workload requiring less system resources, thereby  
13 preventing said system overload condition.

1 14. The machine readable storage according to claim 13, further comprising  
2 analyzing system parameters to determine whether said first workload causes said  
3 system overload condition.

1 15. The machine readable storage according to claim 14, wherein said system  
2 parameters comprises CPU utilization, disk I/O and memory utilization.

16. The machine readable storage according to claim 14, further comprising,  
reporting said system parameters to a workload driver.

17. A machine readable storage having stored thereon, a computer program having  
a plurality of code sections, said code sections executable by a machine for causing the  
machine to perform the steps of:

processing a workload assigned to a workload driver, said processing for  
providing a dynamic workload transition in an e-business system;

monitoring system resources to detect an overload condition while processing  
said workload;

allocating processing resources to a lighter workload when said workload driver  
detects a system overload condition caused by said processed workload during said  
monitoring step; and

if said processed workload still require processing, transitioning to said  
processed workload from said lighter workload upon availability of adequate processing  
resources.